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**LAB: CSE4002 Mobile Application Development LAB**

## **LAB 1**

Questions:

1. Display Text Message using Toast.

```
package com.example.toast_lab1;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
import android.widget.Toast;
import android.widget.Button;

public class MainActivity extends AppCompatActivity {

    private Button button;

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);

        button=(Button) findViewById(R.id.button);

        button.setOnClickListener(new View.OnClickListener() {
```

```
        public void onClick (View view){

            Toast.makeText(MainActivity.this, "Hey , I am Sreenidhi Ganachari",
Toast.LENGTH_LONG).show();

        }

    });

}

}
```



BUTTON

Hey , I am Sreenidhi Ganachari



2. Create different types of Text Views. Take the screen short of the output to find the difference.

Xml Code -

```
<?xml version="1.0" encoding="utf-8"?>
```

```
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
```

```
    xmlns:app="http://schemas.android.com/apk/res-auto"
```

```
    xmlns:tools="http://schemas.android.com/tools"
```

```
    android:layout_width="match_parent"
```

```
    android:layout_height="match_parent"
```

```
    tools:context=".MainActivity">
```

```
<EditText
```

```
    android:id="@+id/editTextTextPersonName"
```

```
    android:layout_width="match_parent"
```

```
    android:layout_height="wrap_content"
```

```
    android:inputType="textPersonName"
```

```
    app:layout_constraintTop_toTopOf="parent"
```

```
<EditText
```

```
    android:id="@+id/editTextpassword"
```

```
    android:layout_width="match_parent"
```

```
    android:layout_height="wrap_content"
```

```
    android:inputType="textPassword"
```

```
    app:layout_constraintTop_toBottomOf="@+id/editTextTextPersonName"
```

```
<EditText
```

```
    android:id="@+id/editTextphone"
```

```
    android:layout_width="match_parent"
```

```
    android:layout_height="wrap_content"

    android:inputType="phone"

    app:layout_constraintTop_toBottomOf="@+id/editTextpassword"

/>
```

<EditText

```
    android:id="@+id/editTextemail"

    android:layout_width="match_parent"

    android:layout_height="wrap_content"

    android:inputType="textEmailAddress"

    app:layout_constraintTop_toBottomOf="@+id/editTextphone"

/>
```

<EditText

```
    android:id="@+id/editTextnumberpassword"

    android:layout_width="match_parent"

    android:layout_height="wrap_content"

    android:inputType="numberPassword"

    app:layout_constraintTop_toBottomOf="@+id/editTextemail"

/>
```

<EditText

```
    android:id="@+id/editTextdate"

    android:layout_width="match_parent"

    android:layout_height="wrap_content"

    android:inputType="date"
```

```
app:layout_constraintTop_toBottomOf="@+id/editTextnumberpassword"  
/>
```

```
<EditText  
    android:id="@+id/editTexttime"  
    android:layout_width="match_parent"  
    android:layout_height="wrap_content"  
    android:inputType="time"  
    app:layout_constraintTop_toBottomOf="@+id/editTextdate"  
/>
```

```
</androidx.constraintlayout.widget.ConstraintLayout
```

9:16 PM 97%

TextView\_Lab1

Sreenidhi

.....

5123689563

sreenidhi.123@gmail.com

.....

05/10/21

5:42

1 2 3 -

4 5 6 .

7 8 9 ✕

: 0 ⌵ ✓

9:15 PM 97%

TextView\_Lab1

Sreenidhi

.....

5123689563

sreenidhi.123@gmail.com

.....

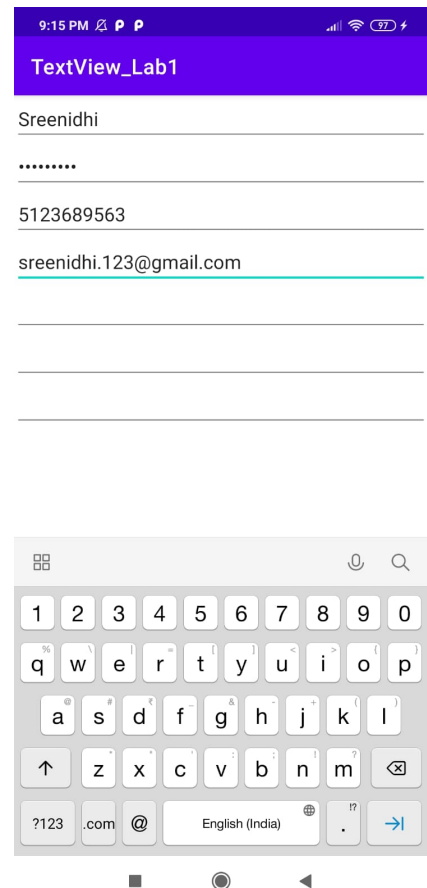
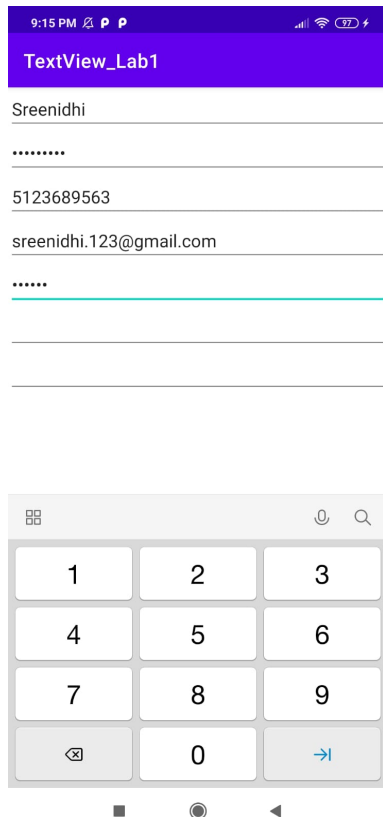
05/10/21

1 2 3 -

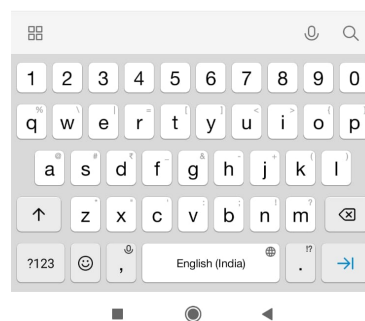
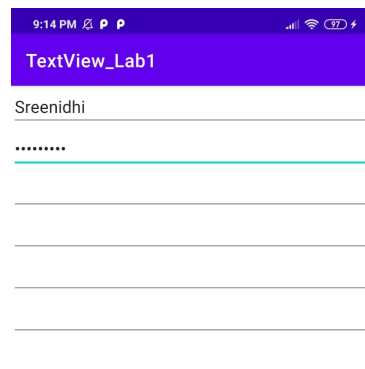
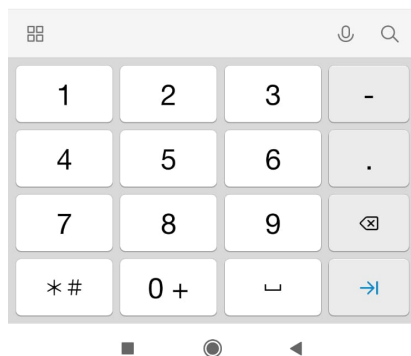
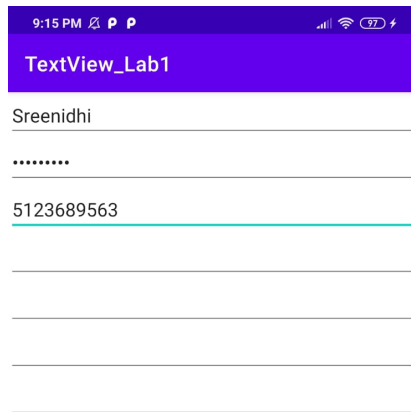
4 5 6 .

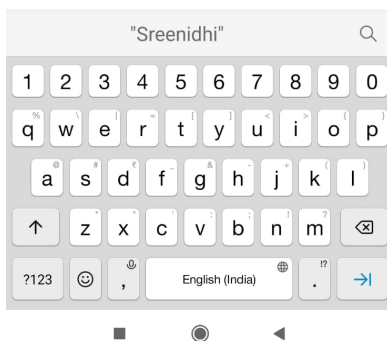
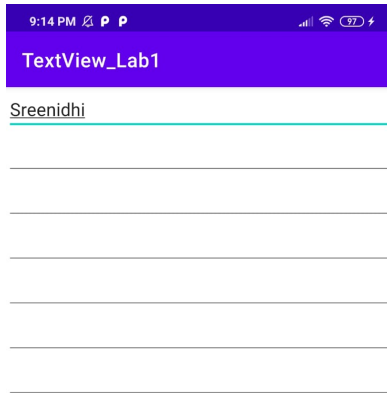
7 8 9 ✕

/ 0 ⌵ ➡









3. Read the Name, Regno, Department and college. Display “Welcome Name”.

Main Activity.Java

```
package com.example.name_lab1;
```

```
import androidx.appcompat.app.AppCompatActivity;
```

```
import android.os.Bundle;
```

```
import android.view.View;
```

```
import android.widget.Button;
```

```
import android.widget.EditText;
```

```
import android.widget.TextView;
```

```

public class MainActivity extends AppCompatActivity {

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);

        Button button = (Button) findViewById(R.id.button);

        TextView name = (TextView) findViewById(R.id.name);

        EditText nameField = (EditText) findViewById(R.id.Name);

        button.setOnClickListener(new View.OnClickListener() {

            public void onClick(View view) {

                String enteredName = nameField.getText().toString();

                name.setText("Welcome "+enteredName);

            }

        });

    }

}

```

## XML Code

```

<?xml version="1.0" encoding="utf-8"?>

```

```
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"

    xmlns:app="http://schemas.android.com/apk/res-auto"

    xmlns:tools="http://schemas.android.com/tools"

    android:layout_width="match_parent"

    android:layout_height="match_parent"

    tools:context=".MainActivity">
```

```
<EditText

    android:id="@+id/Name"

    android:layout_width="match_parent"

    android:layout_height="wrap_content"

    android:inputType="text"

    app:layout_constraintTop_toTopOf="parent"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintStart_toEndOf="parent"

/>
```

```
<EditText

    android:id="@+id/RegNo"

    android:layout_width="match_parent"

    android:layout_height="wrap_content"

    android:inputType="text"

    app:layout_constraintTop_toBottomOf="@+id/Name"

/>
```

```
<EditText

    android:id="@+id/Dept"

    android:layout_width="match_parent"

    android:layout_height="wrap_content"

    android:inputType="text"

    app:layout_constraintTop_toBottomOf="@+id/RegNo"

/>
```

```
<EditText

    android:id="@+id/College"

    android:layout_width="match_parent"

    android:layout_height="wrap_content"

    android:inputType="text"

    app:layout_constraintTop_toBottomOf="@+id/Dept"

/>
```

```
<Button

    android:id="@+id/button"

    android:layout_width="match_parent"

    android:layout_height="wrap_content"

    android:text="Show Name"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintTop_toBottomOf="@+id/College"

    tools:layout_editor_absoluteX="57dp"

    tools:layout_editor_absoluteY="450dp" />
```

```

<TextView

    android:id="@+id/name"

    android:layout_width="match_parent"

    android:layout_height="wrap_content"

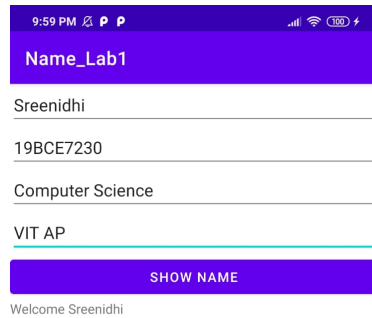
    app:layout_constraintTop_toBottomOf="@+id/button"

/>

</androidx.constraintlayout.widget.ConstraintLayout>

```

OUTPUT -



4. Create a login page to read Userid and Password. Check for validity and display “Login Successful” or “Login Failed”.

Main Activity.Java

```
package com.example.name_lab1;

import androidx.appcompat.app.AppCompatActivity;

import android.graphics.Color;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.EditText;

import android.widget.TextView;

public class MainActivity extends AppCompatActivity {

    private Button button;

    private TextView name;

    private EditText nameField;

    private EditText passwordField;

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);

        button = (Button) findViewById(R.id.button);

        name = (TextView) findViewById(R.id.name);

        nameField = (EditText) findViewById(R.id.Name);
```

```

passwordField = (EditText) findViewById(R.id.Password);

button.setOnClickListener(new View.OnClickListener() {

    @Override

    public void onClick(View view) {

        String enteredName = nameField.getText().toString();

        String enteredPassword = passwordField.getText().toString();

        if (enteredName.equalsIgnoreCase("admin") &&
enteredPassword.equalsIgnoreCase("admin")) {

            name.setTextColor(Color.GREEN);

            name.setText("Logged In successfully !");

        } else {

            name.setTextColor(Color.RED);

            name.setText("Invalid credentials !");

        }

    }

});

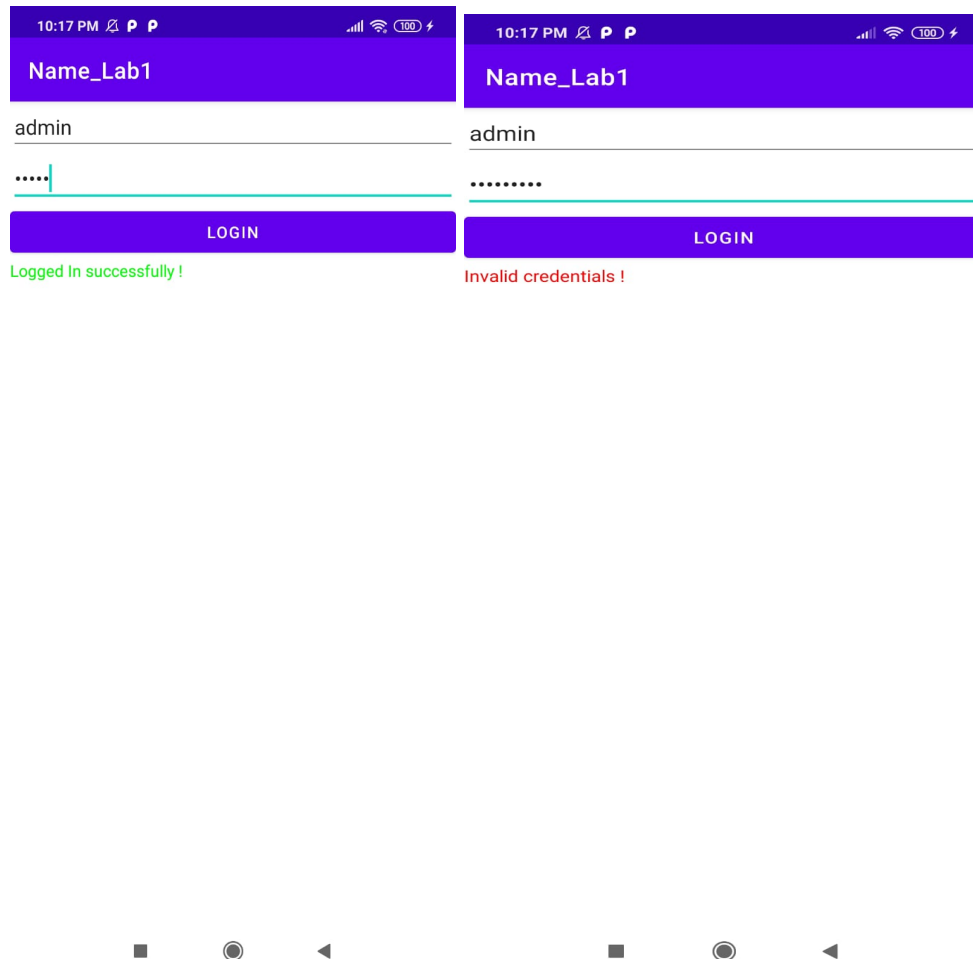
}

}

```

Output -





5. Read two numbers using Text to perform ADD, SUBTRACT, MULTIPLY and DIVIDE and display the output in a Text

MainActivity.java

```
package com.example.name_lab1;

import androidx.appcompat.app.AppCompatActivity;

import android.graphics.Color;
import android.os.Bundle;
```

```
import android.view.View;

import android.widget.Button;

import android.widget.EditText;

import android.widget.TextView;

import android.widget.Toast;


public class MainActivity extends AppCompatActivity {


    private Button add;

    private Button subtract;

    private Button multiply;

    private Button divide;

    private EditText number_1;

    private EditText number_2;

    private TextView result;


    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);


        add = (Button) findViewById(R.id.btn_add);

        subtract = (Button) findViewById(R.id.btn_sub);

        multiply = (Button) findViewById(R.id.btn_mul);
```

```

divide = (Button) findViewById(R.id.btn_div);

number_1 = (EditText) findViewById(R.id.num1);
number_2 = (EditText) findViewById(R.id.num2);

result = (TextView) findViewById(R.id.result);

add.setOnClickListener(new View.OnClickListener() {

    @Override

    public void onClick(View view) {

        try {

            double number_one =
Double.parseDouble(number_1.getText().toString());

            double number_two =
Double.parseDouble(number_2.getText().toString());

            result.setText(String.valueOf(number_one + number_two));

        } catch (Exception e) {

            Toast.makeText(MainActivity.this, e.getMessage(),
Toast.LENGTH_LONG).show();

        }

    }

});

subtract.setOnClickListener(new View.OnClickListener() {

    @Override

    public void onClick(View view) {

```

```

        try {

            double number_one =
Double.parseDouble(number_1.getText().toString());

            double number_two =
Double.parseDouble(number_2.getText().toString());


            result.setText(String.valueOf(number_one - number_two));

        } catch (Exception e) {

            Toast.makeText(MainActivity.this, e.getMessage(),
Toast.LENGTH_LONG).show();

        }

    }

});

```

```

divide.setOnClickListener(new View.OnClickListener() {

    @Override

    public void onClick(View view) {

        try {

            double number_one =
Double.parseDouble(number_1.getText().toString());

            double number_two =
Double.parseDouble(number_2.getText().toString());


            result.setText(String.valueOf(number_one / number_two));

        } catch (Exception e) {

            Toast.makeText(MainActivity.this, e.getMessage(),
Toast.LENGTH_LONG).show();

        }

    }

}

```

```

    });

    multiply.setOnClickListener(new View.OnClickListener() {

        @Override

        public void onClick(View view) {

            try {

                double number_one =
Double.parseDouble(number_1.getText().toString());

                double number_two =
Double.parseDouble(number_2.getText().toString());

                result.setText(String.valueOf(number_one * number_two));

            } catch (Exception e) {

                Toast.makeText(MainActivity.this, e.getMessage(),
Toast.LENGTH_LONG).show();

            }

        }

    });

}

}

```

## XML Code

```

<?xml version="1.0" encoding="utf-8"?>

<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"

    xmlns:app="http://schemas.android.com/apk/res-auto"

    xmlns:tools="http://schemas.android.com/tools"

    android:layout_width="match_parent"

```

```
android:layout_height="match_parent"
```

```
tools:context=".MainActivity">
```

```
<EditText
```

```
    android:id="@+id/num1"
```

```
    android:layout_width="match_parent"
```

```
    android:layout_height="wrap_content"
```

```
    android:inputType="number"
```

```
    android:layout_marginTop="48dp"
```

```
    app:layout_constraintTop_toTopOf="parent"
```

```
    app:layout_constraintStart_toStartOf="parent"
```

```
    app:layout_constraintStart_toEndOf="parent"
```

```
<EditText
```

```
    android:id="@+id/num2"
```

```
    android:layout_width="match_parent"
```

```
    android:layout_height="wrap_content"
```

```
    android:inputType="number"
```

```
    app:layout_constraintTop_toBottomOf="@id/num1"
```

```
    app:layout_constraintStart_toStartOf="parent"
```

```
    app:layout_constraintStart_toEndOf="parent"
```

```
<Button
```

```
    android:id="@+id/btn_add"

    android:layout_width="match_parent"

    android:layout_height="wrap_content"

    android:text="Add"

    android:layout_marginTop="20dp"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintEnd_toEndOf="parent"

    app:layout_constraintTop_toBottomOf="@+id/num2"

/>
```

<Button

```
    android:id="@+id/btn_sub"

    android:layout_width="match_parent"

    android:layout_height="wrap_content"

    android:text="Subtract"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintEnd_toEndOf="parent"

    app:layout_constraintTop_toBottomOf="@+id/btn_add"

/>
```

<Button

```
    android:id="@+id/btn_mul"

    android:layout_width="match_parent"

    android:layout_height="wrap_content"

    android:text="Multiply"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintEnd_toEndOf="parent"

    app:layout_constraintTop_toBottomOf="@+id/btn_sub"
```

```
        />

<Button

    android:id="@+id/btn_div"

    android:layout_width="match_parent"

    android:layout_height="wrap_content"

    android:text="Divide"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintEnd_toEndOf="parent"

    app:layout_constraintTop_toBottomOf="@+id/btn_mul"

    />

<TextView

    android:id="@+id/result"

    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintEnd_toEndOf="parent"

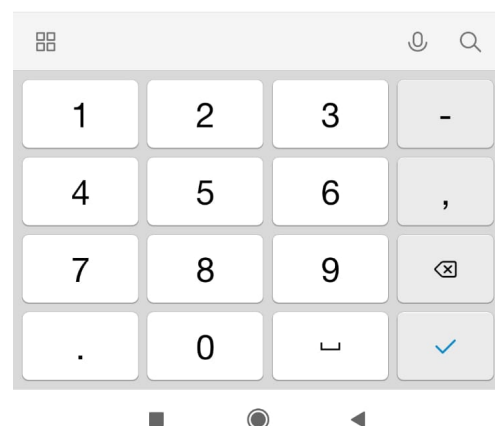
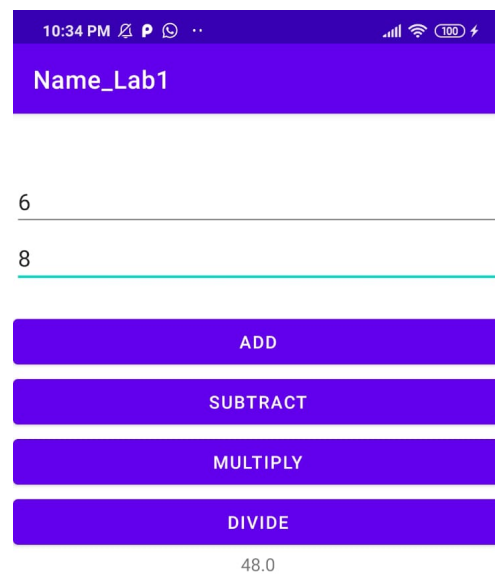
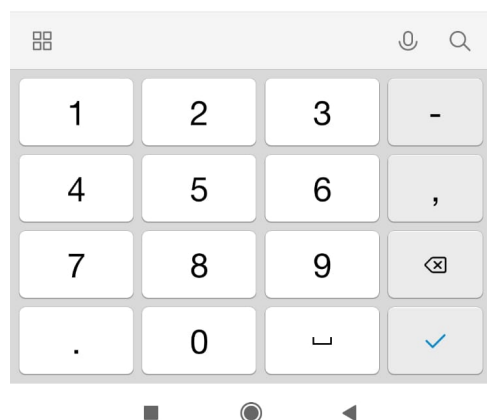
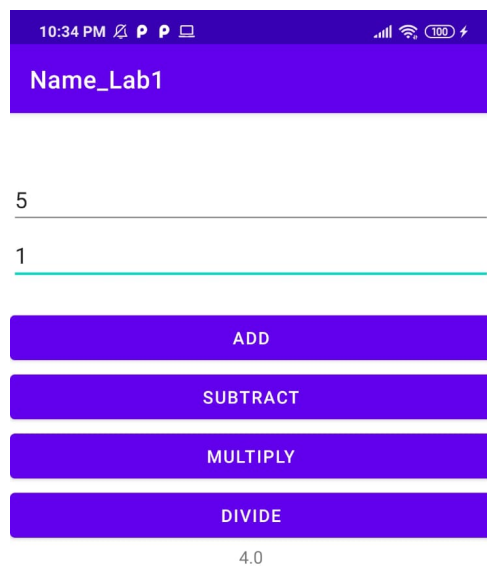
    app:layout_constraintTop_toBottomOf="@+id/btn_div"

    />

</androidx.constraintlayout.widget.ConstraintLayout>
```

OUTPUT -





81

9

ADD

SUBTRACT

MULTIPLY

DIVIDE

9.0

1

2

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✓

2

5

ADD

SUBTRACT

MULTIPLY

DIVIDE

7.0

1

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